



National Aeronautics and
Space Administration

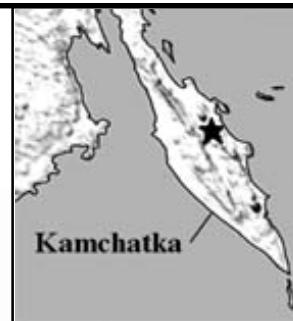
Eruption of Klyuchevskaya Volcano in Kamchatka





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Latitude: 56°N Longitude: 160.5° E
Date: September 30, 1994
Type of Image: Shuttle astronaut photo
Image ID #: STS068-214-045

Shortly after the launch of STS-68 on September 30, 1994, the crew reported thick black smoke over the Kamchatka Peninsula in northeast Russia. On the next orbital pass, the crew took this photograph of the eruption of Klyuchevskaya (a). Klyuchevskaya is Kamchatka's most active volcano, and this eruption was its largest in 40 years. The large eruption cloud (b) billowed from the summit, and deposited volcanic ash (pulverized rock) on the snow-covered region to the east. Another small steam plume was rising from Bezymianny (c), the smaller "C"-shaped volcanic summit south of Klyuchevskaya.

The Klyuchevskaya eruption cloud reached up to 60,000 feet above sea level, and the winds carried the volcanic ash as far as 640 miles southeast from the volcano. The ash cloud interfered with the heavily-traveled north Pacific air routes for 48 hours, diverting up to 70 flights per day and about 10,000 passengers. This image was used by both geologists and aviation specialists because it provided unique information about the dynamics of the eruption plume.

Additional information:

EarthKAM images and lessons:

<http://www.earthkam.ucsd.edu>

JSC *Earth From Space* image database:

<http://earth.jsc.nasa.gov>

NASA Spacelink:

<http://spacelink.nasa.gov>

What effects do you
think this eruption had?

a. Klyuchevskaya

How far did the eruption
cloud spread?

b. eruption cloud

What direction is the
wind blowing?

c. Bezymianny

73.5 Kilometers

73.5 Kilometers

ash below
eruption cloud

cloud

Why are volcanos
often part of a chain
of volcanos?

